

SELF-EXERCISE 3

Good 15/12/17.

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Adding and Subtracting Mixed Fractions

Find the value of each expression in lowest terms.

$$1. 2\frac{1}{5} + 1\frac{3}{4}$$

$$= \frac{11 \times 4}{5 \times 4} + \frac{7 \times 5}{4 \times 5}$$

$$= \frac{44}{20} + \frac{35}{20}$$

$$= \frac{79}{20}$$

LCD

5	1, 4
4	1, 4
11	

$$5. 1\frac{1}{2} + 2\frac{3}{5}$$

$$= \frac{3 \times 5}{2 \times 5} + \frac{13 \times 2}{5 \times 2}$$

$$= \frac{15}{10} + \frac{26}{10}$$

$$= \frac{41}{10}$$

$$= 4\frac{1}{10}$$

LCD

2	2, 5
5	1, 5
11	

$$9. 3\frac{1}{2} - 1\frac{1}{2}$$

$$= \frac{7}{2} - \frac{4}{2}$$

$$= \frac{3}{2}$$

$$2. 3\frac{1}{2} - 2\frac{2}{3}$$

$$= \frac{7 \times 3}{2 \times 3} - \frac{8 \times 2}{3 \times 2}$$

$$= \frac{21}{6} - \frac{16}{6}$$

$$= \frac{5}{6}$$

LCD

2	2, 3
3	1, 3
11	

$$6. 3\frac{1}{2} - 2\frac{5}{9}$$

$$= \frac{7 \times 9}{2 \times 9} - \frac{23 \times 2}{9 \times 2}$$

$$= \frac{63}{18} - \frac{46}{18}$$

$$= \frac{17}{18}$$

LCD

2	2, 9
9	1, 9
11	

$$10. 5\frac{1}{2} + 5\frac{1}{4}$$

$$= \frac{11 \times 2}{2 \times 2} + \frac{21}{4}$$

$$= \frac{22}{4} + \frac{21}{4}$$

$$= \frac{43}{4} = 10\frac{3}{4}$$

LCD

2	2, 4
1, 2	

$$3. 3\frac{1}{2} - 3\frac{1}{2}$$

$$= \frac{7}{2} - \frac{7}{2}$$

$$= 0$$

$$7. 2\frac{3}{4} + 1\frac{1}{5}$$

$$= \frac{11 \times 5}{4 \times 5} + \frac{6 \times 4}{5 \times 4}$$

$$= \frac{55}{20} + \frac{24}{20}$$

$$= \frac{79}{20} = 3\frac{19}{20}$$

LCD

4	4, 5
5	1, 5
11	

$$11. 1\frac{10}{11} - 1\frac{1}{3}$$

$$= \frac{21 \times 3}{11 \times 3} - \frac{4 \times 11}{3 \times 11}$$

$$= \frac{63}{33} - \frac{44}{33}$$

$$= \frac{19}{33}$$

LCD

11	11, 3
3	1, 3
11	

$$4. 5\frac{3}{4} - 5\frac{1}{4}$$

$$= \frac{23}{4} - \frac{21}{4}$$

$$= \frac{2}{4} = \frac{1}{2}$$

$$8. 3\frac{1}{4} - 2\frac{8}{8}$$

$$= \frac{13 \times 2}{4 \times 2} - \frac{19}{8}$$

$$= \frac{26}{8} - \frac{19}{8}$$

$$= \frac{7}{8}$$

LCD

4	4, 8
2	2, 8
8	

$$12. 1\frac{5}{12} + 3\frac{1}{3}$$

$$= \frac{17}{12} + \frac{10 \times 4}{3 \times 4}$$

$$= \frac{17}{12} + \frac{40}{12}$$

$$= \frac{57}{12}$$

LCD

3	12, 3
4	4, 3
3	1, 3
11	

Multiplying and Dividing Fractions

Find the value of each expression in lowest terms.

$$1. \frac{1}{2} \times \frac{5}{4}$$

$$= \frac{5}{8} \quad \checkmark$$

$$6. \frac{1}{4} \times \frac{5}{3}$$

$$= \frac{5}{12} \quad \checkmark$$

$$11. \frac{10^5}{3} \times \frac{11}{83}$$

$$= \frac{55}{9} \quad \checkmark$$

$$= 6\frac{1}{9} \quad \checkmark$$

$$2. \frac{1}{6} \div \frac{8}{11}$$

$$= \frac{1}{6} \times \frac{11}{8} \quad \checkmark$$

$$= \frac{11}{48} \quad \checkmark$$

$$7. \frac{11}{2} \div \frac{1}{2}$$

$$= \frac{11}{2} \times \frac{2}{1}$$

$$= 11 \quad \checkmark$$

$$12. \frac{1}{2} \div \frac{1}{2}$$

$$= \frac{1}{2} \times \frac{2}{1}$$

$$= 1 \quad \checkmark$$

$$3. \frac{1}{3} \div \frac{13}{9}$$

$$= \frac{1}{3} \times \frac{9}{13} \quad \checkmark$$

$$= \frac{3}{13} \quad \checkmark$$

$$8. \frac{4}{3} \div \frac{11}{12}$$

$$= \frac{4}{3} \times \frac{12}{11} \quad \checkmark$$

$$= \frac{16}{11} = 1\frac{5}{11} \quad \checkmark$$

$$13. \frac{14^7}{9} \times \frac{7}{105}$$

$$= \frac{49}{45} \quad \checkmark$$

$$= 1\frac{4}{45} \quad \checkmark$$

$$4. \frac{13}{4} \div \frac{1}{2}$$

$$= \frac{13}{4} \times \frac{2}{1} \quad \checkmark$$

$$= \frac{13}{2} = 6\frac{1}{2} \quad \checkmark$$

$$9. \frac{1}{3} \times \frac{20}{9}$$

$$= \frac{20}{27} \quad \checkmark$$

$$14. \frac{15^5}{8} \times \frac{7}{82}$$

$$= \frac{35}{16} \quad \checkmark$$

$$= 2\frac{3}{16}$$

$$5. \frac{17}{6} \div \frac{3}{5}$$

$$= \frac{17}{6} \times \frac{5}{3}$$

$$= \frac{85}{18} \quad \checkmark$$

$$10. \frac{13}{7} \times \frac{14^2}{11}$$

$$= \frac{26}{11} \quad \checkmark$$

$$= 2\frac{4}{11} \quad \checkmark$$

$$15. \frac{3}{2} \div \frac{4}{9}$$

$$= \frac{3}{2} \times \frac{9}{4} \quad \checkmark$$

$$= \frac{27}{8} \quad \checkmark$$